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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,887	12/15/2003	Robert F. D'Ausilio	IOS9601CIPB	5753
7590 01/04/2006				
Thomas N. Giaccherini Post Office Box 1146 Carmel Valley, CA 93924		EXAMINER SWIATEK, ROBERT P		
		ART UNIT 3643		PAPER NUMBER
DATE MAILED: 01/04/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/736,887

Applicant(s)

D'AUSILIO ET AL

Examiner

Robert P. Swiatek

Art Unit

3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-102 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-102 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

This application contains claims directed to the following patentably distinct species of the claimed invention:

Under the sensor category:

- a. A sensor for performing a satellite rendezvous (claim 18)
- b. A sensor for performing remote sensing (claim 19)
- c. A sensor for performing remote sensing of a satellite in Earth orbit (claim 20)
- d. A sensor for performing remote sensing of a satellite beyond Earth orbit (claim 21)
- e. A sensor for performing a satellite docking maneuver (claim 25)

Under the camera category:

- a. A camera for performing a satellite rendezvous (claim 22)
- b. A camera for performing a satellite docking maneuver (claim 26)

Under the converter category:

- a. A converter of the direct energy type (claim 29)
- b. A converter of the indirect energy type (claim 30)
- c. A converter of the thermoelectric type (claim 31)
- d. A converter of the Rankine Cycle type (claim 32)
- e. A converter of the Stirling Cycle type (claim 33)

Under the nuclear reactor category:

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- a. A nuclear reactor that is gas-cooled (claim 34)
- b. A nuclear reactor that is cooled by a liquid metal (claim 35)
- c. A nuclear reactor that is cooled by a thermoelectric cooler (claim 89)

Under the ion propulsion category:

- a. An ion propulsion system that emits xenon ions (claim 40)
- b. An ion propulsion system that includes a Hall thruster (claim 41)

Under the direct communication service category:

- a. A direct communication service conducted using frequency bands 11 and 12 (claim 57)
- b. A direct communication service conducted in orbit around Earth (claim 58)
- c. A direct communication service conducted beyond Earth orbit (claim 59)
- d. A direct communication service conducted using electromagnetic frequencies (claim 60)
- e. A direct communication service conducted using optical frequencies (claim 61)
- f. A direct communication service conducted at extremely high output power (claim 62)
- g. A direct communication service conducted using a network (claim 63)

Under the application category:

- a. An apparatus used to correct an anomalous satellite orbit (claim 64)
- b. An apparatus used to provide mobility for a satellite (claim 65)
- c. An apparatus used to move a spare spacecraft from one part of an orbit to another (claim 68)
- d. An apparatus used for on-orbit satellite inspection (claim 69)

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- e. An apparatus used to repair a satellite in orbit (claim 70)
- f. An apparatus used to extend the useful life of a satellite (claim 71)
- g. An apparatus used to maintain a fleet of satellites (claim 83)
- h. An apparatus used to provide services to a spacecraft manufacturer (claim 91)
- i. An apparatus used to provide services to a spacecraft user (claim 95)
- j. An apparatus used as a reusable upper stage of a conventional launch vehicle (claim 97)

Applicants are required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1, 101, 102 are generic.

Applicants are advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicants will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicants must indicate which are readable upon the elected species. MPEP § 809.02(a).

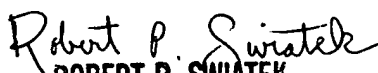
Should applicants traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the

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examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

A proper response to this election requirement will elect one species (a, b, c ...) from each of the seven listed categories.

RPS: 0571/272-6894
13 December 2005


ROBERT P. SWIATEK
PRIMARY EXAMINER
ART UNIT 383 3643